



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,442	04/01/2004	Tadashi Takano	3082.EEM	7775

7590 03/23/2005
JANE E. GENNARO
National Starch and Chemical
10 Finderne Avenue
Bridgewater, NJ 08807

EXAMINER

MULLIS, JEFFREY C

ART UNIT PAPER NUMBER

1711

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/815,442

Applicant(s)

TAKANO, TADASHI

Examiner

Jeffrey C. Mullis

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>404/2</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit 1711

Claims 1-8 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

It is not clear what applicants intend by the phrase "bismaleimide resin powder that does not dissolve" in that 0 of anything (in the instant case 0 dissolution) is generally uncertain and dependent on detection limits, i.e. it is not clear if 1 part per million dissolution or 1 part per billion or 1 part per trillion, etc. would still be embraced by applicants' limitation that the resin powder "does not dissolve". Note in this regard that Carew et al., U.S. Patent 6,831,046 at column 12 lines 22-24 discloses that by insoluble they mean not soluble at a concentration of 0.1% by weight at 25°C. Note Boykin and Guo et al. which recite similar lower limits of non-solubility for their definition of "insoluble". Lastly solubility is a function of temperature which is not recited by the instant claims.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit 1711

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this

Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 6-8 are rejected under 35 U.S.C. § 102(b) as being anticipated by Repeka (U.S. 5,747,615).

Repeka discloses a process for preparation of an adhesive resin containing a wood monomer and a "reactive comonomer (which) is substantially insoluble in the organic liquid reactive monomer". See claim 1 in this regard. Note that claim 2 discloses that the comonomer is in particulate form. Note Example 2 for production of a bismaleimide composition in which the bismaleimide is dispersed in particulate form and microscopic examination shows that the particles still exist after dispersion. Note Example 4 where a cyanate resin is used with the bismaleimide.

Claims 1-8 are rejected under 35 U.S.C. § 102(b) as being anticipated by Boyd et al. (U.S. 6,313,248).

Claim 1 of Boyd et al. discloses a thermosettable resin

Art Unit 1711

composition containing a "solid aromatic diamine bismaleimide resin" and liquid resins; see claims 7 and 8 of the patent for applicants' specific bismaleimides. The composition is mixed under conditions under which little or no dissolution of bismaleimide takes place by adding particulate bismaleimide and forming a slurry at column 7 lines 44-45; 0 dissolution is disclosed at column 8 lines 17-24. Note Example 12 for use of methylene or aniline (BMI, note column 4 line 63 for definition of "BMI"). Cyanate and epoxy comonomers may be used at column 5 line 44 - column 6 line 19..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Mullis whose telephone number is (571) 272-1075. The examiner can normally be reached on Monday-Friday from 9:30 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on (571) 272-1078. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-0994.

Serial No. 10/815,442

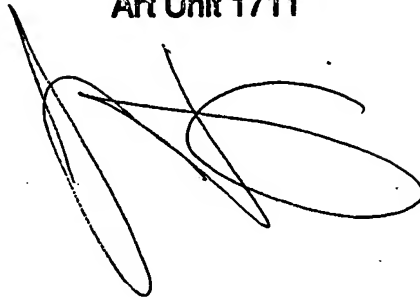
-5-

Art Unit 1711

J. Mullis:cdc

March 19, 2005

**Jeffrey Mullis
Primary Examiner
Art Unit 1711**

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke, positioned below the printed name.